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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/664,176	09/17/2003	Robert W. Levi	42616-0500	3336

7590

06/03/2005

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EXAMINER

TRAN, DALENA

ART UNIT

PAPER NUMBER

3661

DATE MAILED: 06/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.



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EXAMINER
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ART UNIT	PAPER
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20050527

DATE MAILED:

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Commissioner for Patents

## Office Action Summary

**Application No.**

10/664,176

**Applicant(s)**

LEVI ET AL.

**Examiner**

Dalena Tran

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### **Notice to Applicant(s)**

1. This office action is responsive to the amendment filed on 3/17/05. As per request, claims 1, 3-4, and 13 have been amended. Claims 14-17 have been added. Thus, claims 1-17 are pending.
2. The Declaration filed on 3/17/05 under 37 CFR 1.131 is sufficient to overcome the Ladetto et al. (US 2003/0018430 A1) reference.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1,6, and 16-17, are rejected under 35 U.S.C.102(b) as being anticipated by Hsu et al.( 6,243,660).

As per claim 1, Hsu et al. disclose a navigation device comprising: an electronic compass to detect an orientation and provide a corresponding heading signal (see column 2, lines 42-67), one or more motion sensing device to detect motion along different axis and provide corresponding motion signals (see the abstract; and column 6, lines 57-67), and a processing unit communicatively coupled to the electronic compass and one or more motion sensing device to

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receive the heading signal and the one or more motion signals, determine a position and orientation, and automatically provide different navigation information depending on the orientation of the navigation device (see column 7, lines 1-23).

As per claim 6, Hsu et al. disclose a communication port to transmit navigation information (see column 4, lines 35-44).

As per claim 16, Hsu et al. disclose determining the orientation of a gravity vector (see column 3, lines 1-14, and lines 21-53).

As per claim 17, Hsu et al. disclose a detector to detect when the navigation device is inserted in a holster (see columns 4-5, lines 45-3).

5. Claims 7, and 12, are rejected under 35 U.S.C.102(e) as being anticipated by Soehren et al. (6,522,266).

As per claim 7, Soehren et al. disclose determining whether the navigation device is affixed to a user, obtaining, and providing an azimuth heading (see column 14, lines 22-36), calculating a dead reckoning position if the navigation device is affixed to the user, and providing azimuth heading and dead reckoning position if the navigation device is affixed to the user (see columns 14-15, lines 37-45).

Claim 12, is a machine readable medium claim corresponding to method claim 7 above. Therefore, it is rejected for the same rationales set forth as above.

6. Claims 9-10, and 14-15, are rejected under 35 U.S.C.102(e) as being anticipated by Reilly et al. (6,366,855).

As per claim 9, Reilly et al. disclose a method comprising: determining the orientation of a navigation device (see columns 6-7, lines 28-21), automatically selecting a first motion

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measurement algorithm if the navigation device is in a first orientation, and providing a position according to the pedometry algorithm selected (see columns 7-8, lines 21-29), and automatically selecting a second motion measurement algorithm if the navigation device is in a second orientation (see columns 8-9, lines 30-12).

As per claim 10, Reilly et al. disclose the orientation of the navigation device is determined relative to a horizontal plane (see column 5, lines 9-28).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2-3, are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu et al. (6,243,660) in view of Kubo et al. (US 2002/0089425 A1).

As per claim 2, Hsu et al. do not disclose provide different navigation information depending on whether the navigation device is affixed to a user or not. However, Kubo et al. disclose the processing unit is further configured to provide different navigation information depending on whether the navigation device is affixed to a user or not (see [0004] to [0007]; [0034] to [0038]; and [0061] to [0066]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Hsu et al. by combining provide different navigation information depending on whether the navigation device is affixed to a user or not for accurately determine a user heading and position information.

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As per claim 3, Hsu et al. disclose a visible indicator to provide navigation information to a user (see column 3, lines 15-20; and column 5, lines 4-19).

9. Claims 4-5, are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu et al. (6,243,660) in view of Reilly et al. (6,366,855).

As per claim 4, Hsu et al. do not disclose automatically switches between different modes of operation. However, Reilly et al. disclose the navigation device automatically switches between different modes of operation depending on the orientation of the navigation device, and provides either heading or position information, depending on the mode of operation (see columns 6-7, lines 28-21). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Hsu et al. by combining automatically switches between different modes of operation for determining position, velocity, and heading of the user in different orientation and positions.

As per claim 5, Hsu et al. do not disclose if the navigation device is hand held, only azimuth data is provided to the user (see columns 4-5, lines 29-3). Hsu et al. do not disclose bipedal ambulation, and crawling ambulation. However, Reilly et al. disclose if the navigation device is affixed to a user and the device is in a primary orientation, navigation calculations are made according to bipedal ambulation to provide a position (see columns 7-8, lines 21-29), if the navigation device is affixed to a user and the device is in a secondary orientation, navigation calculations are made according to crawling ambulation to provide a position (see columns 8-9, lines 30-12). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Hsu et al. by combining bipedal ambulation, and crawling ambulation to determine user position and heading in different orientation of the body.

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10. Claims 8, 11, and 13, are rejected under 35 U.S.C. 103(a) as being unpatentable over Soehren et al. (6,522,266) in view of Reilly et al. (6,366,855).

As per claim 8, Soehren et al. do not disclose bipedal ambulation, and crawling ambulation. However, Reilly et al. disclose determining an orientation of the navigation device relative to a horizontal plane (see column 5, lines 9-28), calculating the dead reckoning position according to bipedal ambulation when the navigation device is affixed to a user and is in a first orientation (see columns 7-8, lines 21-29), calculating the dead reckoning position according to crawling ambulation when the navigation device is affixed to a user and is in a second orientation (see columns 8-9, lines 30-12). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Soehren et al. by combining bipedal ambulation, and crawling ambulation to determine user position and heading in different orientation of the body.

As per claim 11, Soehren et al. disclose determining whether the navigation device is affixed to a user (see column 14, lines 23-37), automatically selecting the first motion measurement algorithm if the navigation device is in the first orientation and affixed to the user, and automatically selecting the second motion measurement algorithm if the navigation device is in the second orientation and affixed to the user (see columns 14-15, lines 37-46). Soehren et al. do not explicitly disclose suspending all motion measurement calculation if the navigation device is not affixed to the user. However, it is obvious that when the navigation device is not affixed to the user, there is no motion detected, and cannot measure any heading or position, therefore, all motion measurement calculation will be suspended. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Soehren et al.



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by combining determining whether the navigation device is affixed to a user to determine appropriate user position and heading information.

Claim 13, is a machine readable medium claim corresponding to method claim 8 above. Therefore, it is rejected for the same rationales set forth as above.

### **Remarks**

11. Applicant's argument filed on 3/17/05 has been fully considered. Upon updated search, the new ground of rejection has been set forth as above.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalena Tran whose telephone number is 571-272-6968. The examiner can normally be reached on M-F 6:30 AM-4:00 PM), off every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on 571-272-6956. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patent Examiner  
Dalena Tran



May 27, 2005